A NEW PREDATORY MITE FROM INSECT CULTURE[1]

(Acarina, Phytoseiidae)

By Ralph A. Bram, *University of Maryland, College Park*

An infestation of mites in a laboratory culture of the Angoumois grain moth, *Sitotroga cerealella* Oliv., at the Department of Entomology, University of Maryland, was found to consist of an undescribed species of *Garmania.* Ears of corn were taken from the storage bin of the Plant Research Farm near College Park, Maryland, on October 13, 1955, and placed in large jars at room temperature. On October 20, 1955, great numbers of mites were found associated with the eggs of the Angoumois grain moth. Hughes, (1948), has reported *Blattisocius tineivorus* (Oudemans) infesting stored food products; *Blattisocius tineivorus* and *B. keegani* Fox collected from stored food products and laboratory cultures are also in the U. S. National Museum collection.

The author expresses his appreciation to Dr. Edward W. Baker for help in writing the description.

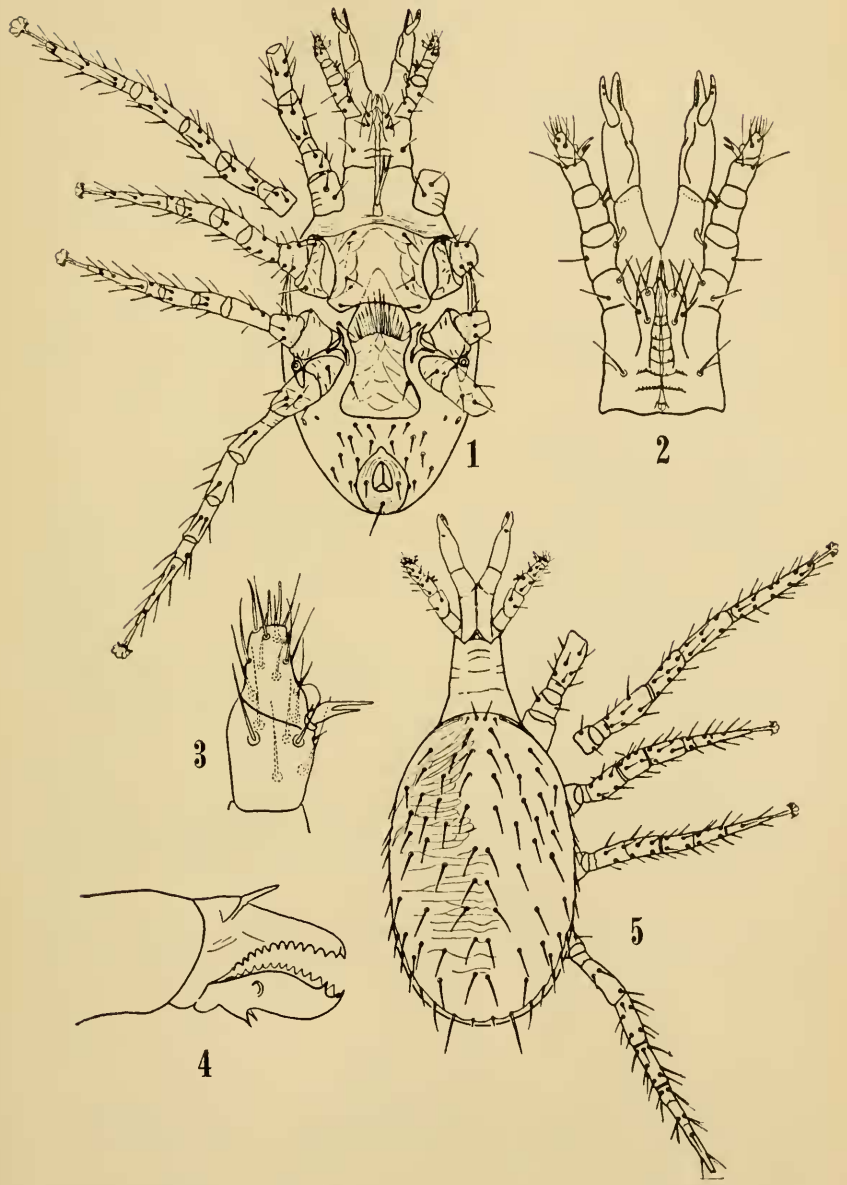
Garmania bickleyi, new species

(Figures 1, 2, 3, 4, 5)

Garmania bickleyi is related to those species having a small anal plate with only the single pair of paraanal setae (Nesbitt, 1951). It is distinctive in having all ventral hypostomal setae of equal strength, in having many cheliceral teeth, and a triangular serrated epistome. Its nearest relative, *G. bulbicola* (Oudemans), has the anterior pair of ventral hypostomal setae very strong, several times thicker than the others, and has few cheliceral teeth. *G. bickleyi* also differs from *bulbicola* in that the anal plate is knobbed anteriorly. *G. novae-guineae* (Oudemans) has very short dorsal body setae and possesses only one long seta on the dorsum of the fourth tarsus, while *bickleyi* has all tarsal setae of equal length; the anal plate of *novae-guineae* does not possess an anterior knob. *G bickleyi* differs from *G. domestica* (Oudemans) in that the latter has short dorsal setae which do not reach half way to the next row. The anterior margin of the genital plate of *bickleyi* is pointed rather than rounded. *G. bickleyi* differs from *G. pomorum* (Oudemans) in having anterior lateral wings on the sternal plate and also in having a pointed genital plate.

Female.—The epistome is triangular and with a slightly serrate margin. There is a membrane between the base of the forked seta and the last palpal segment. A small spine is on the base of the forked seta. The fixed chela possesses 14 teeth; the movable chela possesses a forked distal tooth and a larger proximal tooth. The lateral membrane of the chelicerae is strongly serrated. The ventral

[1]Scientific Art. No. A530, Contribution No. 2665 of the Maryland Agricultural Experiment Station, Department of Entomology.



Garmania bickleyi, n. sp.: fig. 1, ventral view of female; fig. 2, ventral view of gnathosoma; fig. 3, details of distal segments of palps; fig. 4, chelicera showing teeth on fixed chela and membranous teeth on movable chela; fig. 5, dorsal view of female.

hypostomal setae are equal in strength. The dorsal setae are strong and reach to the base of the next row; the marginal setae are somewhat shorter. The dorsal sculpture pattern is faint. The sternal plate has three pairs of setae; it is rounded in front, concave on the lateral and posterior margins, and has anterior lateral extensions. The genital plate is pointed anteriorly and slightly rounded posteriorly. The anal plate is rounded with a small anterior knob and has a single pair of paraanal setae and a longer single median posterior seta. There are 9 pairs of setae lateral and anterior to the anal plate. The peritreme reaches anteriorly past coxa I. All tarsal setae are of equal strength. The body, exclusive of the gnathosoma, is 425 μ long and 253 μ wide.

Male.—Unknown.

Nymph.—Unknown.

Type Habitat. On laboratory cultures of *Sitotroga cerealella* Oliv., at the Department of Entomology, University of Maryland, College Park, Maryland.

Holotype. U. S. National Museum No. 2223, found in the above habitat on October 20, 1955.

Paratypes. 28 specimens with the above data deposited in the U. S. National Museum. This species has also been studied from the National Museum Collection which were collected at Quarantine on plant material from Jamaica, Holland, Tahiti, Haiti, Lebanon, Liberia, France, Mexico, Cuba, Brazil, and Peru. Others are from Illinois, Minnesota, and New York.

This species is named for Dr. W. E. Bickley of the Staff of the Department of Entomology at the University of Maryland in appreciation for the help and encouragement he has given his students.

References

Cunliffe, F., and E. W. Baker, 1953. A guide to the predatory phytoseiid mites of the United States. Pinellas Biol. Lab., Inc., Publication No. 1, pp. 1-28.

Hughes, A. M., 1948. The mites associated with stored food products. Ministry of Agriculture and Fisheries. His Majesty's Stationery Office, London. pp. 1-168.

Nesbitt, H. H. J., 1951. A taxonomic study of the phytoseiinae (Family Laelaptidae) predaceous upon Tetranychidae of economic importance. Zool. Verhandel. 12:1-64, 32 pls.

BOOK NOTICE

BIRD AND BUTTERFLY MYSTERIES, by Bernard Ackworth. Introduction by Brian Vesey-Fitzgerald. The Philosophical Library, Inc., New York. 303 pp., 11 text figures, 3 colored plates. 1956. Price $7.50.

The present volume is a revision of two popular early works, *The Cuckoo and Other Bird Mysteries and Butterfly Miracles and Mysteries*, both of which were written by this very perceptive layman.—Richard H. Foote, *Entomology Research Branch, U. S. Department of Agriculture, Washington, D. C.*